ABSTRACT

IMPROVEMENTS IN OR RELATING TO PACKET SWITCHES

The invention relates to cell level scheduling for handling multicast traffic in routing devices, for example cross-bar switches. The routing device has a plurality of ingress line interface cards (LICs), a plurality of egress LICs, a cross-bar and a controller. Multicast and unicast data traffic passes from the ingress LICs via the cross-bar to the egress LICs. A given multicast data packet is sent from a given ingress LIC to a predetermined set of egress LICs known as the fanout of the given packet. Each ingress LIC has an associated rate of send opportunities. The inventive method allows multicast send opportunities to be spread as evenly as possible over cell periods. The method also invokes a conventional unicast scheduling scheme when no multicast send opportunity is scheduled and a multicast scheduling scheme when one or more multicast send opportunities are present. The schedule is filled out with the fanouts of multicast packets in accordance with the send priority associated with the respective ingress LICs upon which each of the respective multicast packets is queued.

(Fig. 2)